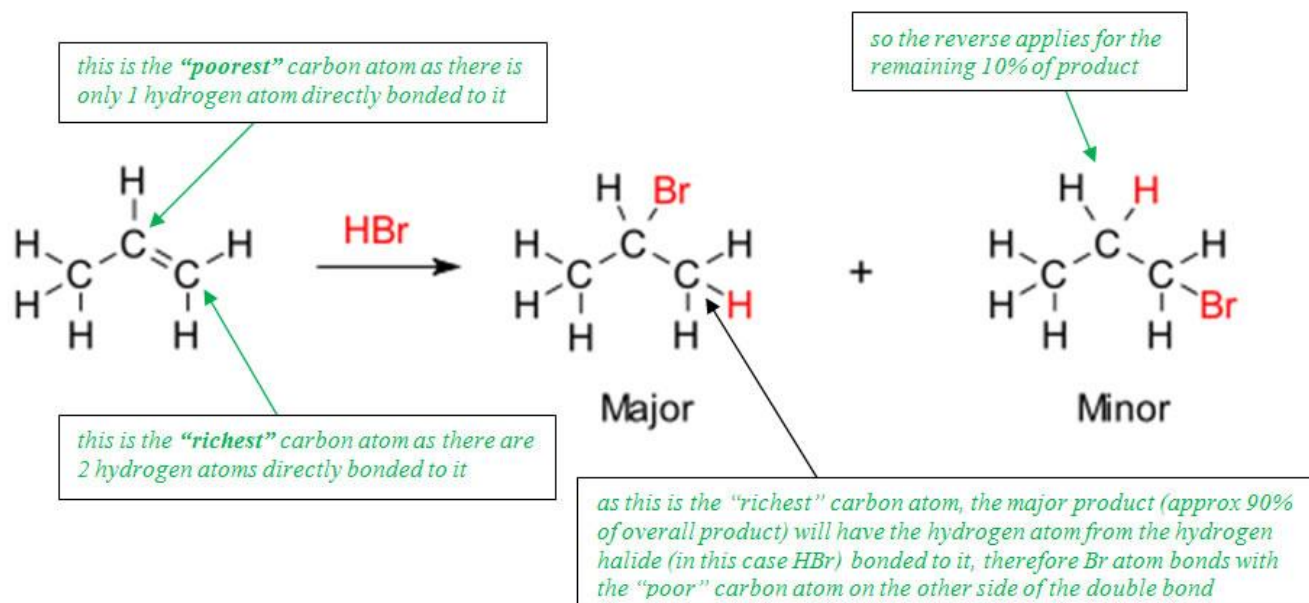


**Major and minor products of addition reactions examiner's tips: Read these please!**

**Markovnikov's rule** is used to predict the major and minor products of an addition reaction of asymmetric alkenes with 3 or more carbon atoms

- 1) look at the 2 carbon atoms on either side of the carbon to carbon double bond
- 2) count the hydrogen atoms directly bonded to each of the carbon atoms, one of those carbon atoms has more hydrogen atoms directly bonded to it, so, this is known as the "richer" carbon atom
- 3) therefore the hydrogen from the hydrogen halide (or water) will more often bond onto this carbon (which already contains the most hydrogen atoms) when the double bond breaks.
- 4) so, the eg *halide from the hydrogen halide* will bond onto the carbon atom in the double bond which has the least number of hydrogen atoms already bonded onto it

gobbledygook!!!??? see the image below



**Also... "don't be daft"**

"the rich get richer" means NOTHING! see explanation above and use something similar in your answers ensure you describe your reasons for formation of both "major" and "minor" products